LANDS AND FORESTS
TECHNICAL NOTE

FOOD HABITS OF THE FISHER *(Martes pennanti)* IN NOVA SCOTIA

Stephen B. Anderson

The fisher (*Martes pennanti*) is a native mammal of Nova Scotia. Gilpin (1867) reported that fishers were never very plentiful and at that time were becoming extinct. Whether or not they did is unknown but in 1947-48, a reintroduction program was carried out. A second reintroduction followed in 1963 (Dodds, 1971).

These reintroductions have successfully re-established the fisher in Nova Scotia. At present a bag limit of one is permitted to those who hold a fur harvester's license.

In an attempt to learn more about the fisher in Nova Scotia the carcasses of all fishers trapped are to be turned over to the Department of Lands and Forests for analysis. This is a report of the food habits of fishers caught in Nova Scotia between December 1983 and January 1986.

MATERIALS AND METHODS

Fisher carcasses were turned into District Lands and Forests offices where they were assigned a number. Basic information was obtained as to locations and dates of capture. Carcasses were frozen and sent to Kentville for processing.

Carcasses were weighed and measured, a canine tooth was removed for aging, female reproductive tracts were examined, and the gastrointestinal tract was removed. The tract was separated into stomach and intestinal sections, contents removed, dried, and frozen.

These contents were then sent to Holland College in Summerside, P.E.I. where the contents were separated, examined, and identified by the Resource Management Technology students.

RESULTS AND DISCUSSION

The gastrointestinal contents of 44 fisher captured between December 1983 and January 1986 in Nova Scotia are shown in Table 1.

Snowshoe hare composed the most abundant food source at 40.9%. Since fishers are generally solitary, they are limited to killing their own size or smaller (Powell, 1982). The snowshoe hare would be the largest, most abundant prey animal available to fishers in Nova Scotia. The ranges of these two animals overlap each other and Powell (1982) states that snowshoe hares were the most common food item found in the fisher's gastrointestinal tracts.

White-tailed deer were found in 29.5% of the samples. While it is obvious that a fisher would not be able to take down a deer in most cases, the fisher is opportunistic and will feed on carrion. Since these samples were collected during the trapping season which parallels and follows the deer season, it is not unreasonable to find deer carrion in the woods due to the deaths of wounded deer or the remains of "gut piles".

Fishers are one of the few predators able to successfully kill porcupines with little injury to ifself. Porcupine was found in 27.3% of the samples.

Surprisingly, raccoon and skunk made up the next portion of the diet at 25.0% and 22.7% respectively. An explanation for this could be that these two species were used for bait or that the fishers were feeding on carrion. Fishers are known to raid traps for food. Brown and Will (1979) report the presence of skunk and raccoon remains in fisher stomach contents.

The small mammals made up a total of 31.9% of the diet (meadow vole 11.4%, red squirrel 11.4%, red-backed vole 6.8%, and masked shrew 2.3%). Small mammals make up a large portion of fisher diets in other studies.

The presence of fish bones in the diet indicates the use of fish as bait. Fisher are not known to catch fish and since samples were obtained in the winter, the fisher would not have had access to fish due to the ice conditions.

Beaver and muskrat are generally inaccessible to fisher due to their aquatic habits. The presence of these animals in the fisher's diet indicates the use of beaver and muskrat as bait or, these animals were caught on land where they would be fair game to the fisher.

Ruffed grouse are eaten by fisher according to Powell (1982). However, fisher are not an important predator of grouse (Brown and Will, 1979). Grouse frequently rest beneath the snow and may be vulnerable to predation

89-00638/

at these times although no evidence exists that fishers hunt grouse in their snow roosts.

The presence of mink and bear in the diet is unusual but these species may have been picked up as carrion.

Vegetation was found in 86.4% of the samples. The presence of plant matter is probably due to ingestion with other foods or the chewing of vegetation while in a trap.

ACKNOWLEDGEMENTS

The author would like to thank the district staff and biologists of the Nova Scotia Department of Lands and Forests for their help in the collection and initial processing of the carcasses. Thanks also to John Mills for his assistance in processing the carcasses and to the Resource Management Technology students of Holland College for the identification of the prey items.

REFERENCES

Brown, M.K. and G. Will. 1979. Food habits of the fisher in northern New York. *N.Y. Fish and Game J.* 26(1):87-92.

Dodds, D.G. and A.M. Martell. 1971. The recent status of the fisher, *Martes pennanti* (Erxleben), in Nova Scotia. *Can. Field-Nat.* 85(1):63-65.

Powell, R.A. 1982. *The Fisher: Life History, Ecology and Behaviour.* University of Minneapolis Press. Minneapolis. 217pp.

Stephen B. Anderson, M. Sc.
Resource Management Technology

Holland College
Harbourside Center
298 Water Street
Summerside, P.E.I.
C1N 1B8

Table 1. *Gastrointestinal contents of 44 fishers trapped Nova Scotia 1987.*

Item	Frequency	Percent
Vegetation	38	86.4
Snowshoe hare	18	40.9
White-tailed deer	13	29.5
Porcupine	12	27.3
Raccoon	11	25.0
Skunk	10	22.7
Meadow vole	5	11.4
Red squirrel	5	11.4
Fish bones	3	6.8
Red-backed vole	3	6.8
Beaver	3	6.8
Muskrat	3	6.8
Ruffed grouse	2	4.5
Mink	1	2.3
Masked shrew	1	2.3
Black bear	1	2.3
Unknown mammal	1	2.3